DOCUMENT RESUME

ED 265 508 CS 008 279

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TITLE Use of Standardized Reading Tests as Measures of Reading Achievement.
PUB DATE [81]
NOTE 9p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Comparative Analysis; Evaluation Methods; Grade 3; *Informal Reading Inventories; Primary Education; *Reading Achievement; Reading Diagnosis; *Reading Research; *Reading Tests; *Standardized Tests; *Test Reliability

ABSTRACT

A study was conducted to provide insight into the consistency of reading achievement scores from four standardized tests. Several sets of data were compared to assess the accuracy of grade equivalents or instructional reading levels obtained on standardized tests. Each test was randomly assigned for administration to 23 third graders in a group setting during one of four consecutive mornings. The four tests were: (1) the Iowa Tests of Basic Skills (Form 4); (2) Stanford Achievement Test (Primary Level III--Form A); (3) Gates-MacGinitie Reading Test (Level C--Form 2); and (4) Metropolian Achievement Test (Elementary--Form F)--Metro. The resulting grade levels revealed significant discrepancies across the different tests. Seventy percent of the children received grade scores ranging over more than one year. A comparison of the instructional reading levels obtained from the Metro with those obtained from a subsequently administered informal reading inventory indicated that more than 50% of instructional reading levels from the Metro varied as much as two to five reader levels from those of the informal reading inventories. The results did not support the use of standardized test scores as adequate measures of reading achievement or as a substitute for individually administered informal reading inventories. (HTH)

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USE OF STANDARDIZED READING TESTS AS MEASURES OF READING ACHIEVEMENT

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Runninghead: Standardized Tests

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Use of Standardized Reading Tests as Measures of Reading Achievement

During this study, data were collected to provide insight into the accuracy of measures of reading achievement as determined by various standardized tests.

Standardized test scores in reading are used by many administrators, counselors, teachers, and other professionals to obtain specific information about a child's instructional reading level. When asked to give an interpretation of vocabulary and comprehension grade equivalent scores of 5.2 and 5.6 respectfully, obtained by a fifth grader in September on the Gates-MacGinitie Reading Test, over sixty-five percent of five hundred and thirty teachers, stated that the scores indicated the child was reading at or near the fifth grade level.

Furthermore, a number of school systems have adopted standardized tests like the Metropolitan Achievement Tests (Metro) to assist in grouping and measuring individual pupil progress. Some educators may have been attracted by the statement that the Metro could be used: "1. To provide an estimate of each pupil's Instructional Reading Level" and "2. To help the teacher form instructional reading groups within the class." (Prescott, Barlow, Hogan and Farr, 1978, p. 76)

Several sets of data were compared to assess the validity or accuracy of grade equivalents or instructional reading levels obtained on standardized tests like the Metro In the first instance, the vocabulary sections of four standardized reading tests were administered to a third grade class in a public elementary school. Each test was randomly assigned for administration in a group setting during one of four consecutive mornings:

Monday - Iowa Test of Basic Skills (Form 4)

Tuesday - Stanford Achievement Test (Primary Level III: Form A)

Wednesday - Gates-MacGinitie Reading Tests (Level C - Form 2)

Thursday - Metropolitan Achievement Tests (Elementary - Form F)

Table 1 presents the grade equivalents received by the children on each standardized test.

Table 1

Students	Iowa	Metropolitan	Gates MacGinitie	Stanford Achievement	Range
1	4.4	4.7	5.5	3.8	3.8 - 5.5 (1.7 yrs)
2	4.9	4.5	4.6	3.3	3.3 - 4.9 (1.6 yrs)
3	3.8	4.0	4.9	3.8	3.8 - 4.9 (1.1 yrs)
4	5.1	6.1	4.9	4.7	4.7 - 6.1 (1.4 yrs)
5	4.6	5.9	6.5	5.1	4.6 - 6.5 (1.9 yrs)
6	4.9	5.7	5.9	*	4.9 - 5.9 (1.0 yrs)
7	4.4	5.0	5.1	4.4	4.4 - 5.1 (.7 yrs)
8	5.3	5.0	3.0	3.5	3.0 - 5.3 (2.3 yrs)
9	4.2	4.1	4.0	4.2	4.0 - 4.2 (.2 yrs)
10	3.6	4.0	3.7	3.3	3.3 - 4.0 (.7 yrs)
11	4.6	5.4	5.7	4.2	4.2 - 5.7 (1.5 yrs)
12	5.1	5.9	5.7	5.1	5.1 - 5.9 (.8 yrs)
13	5.8	6.6	7.1	5.1	5.1 - 7.1 (2.0 yrs)
14	4.8	5.0	4.4	3.8	3.8 - 5.0 (1.2 yrs)
15	3.5	3.1	2.6	2.7	2.6 - 3.5 (.9 yrs)
16	*	2.8	4.7	3.6	2.8 - 4.7 (1.9 yrs)
17	3.4	3.1	2.9	2.7	2.7 - 3.4 (.7 yrs)
18	5.3	6.6	6.1	5.1	5.1 - 6.6 (1.5 yrs)
19	3.7	4.5	5.1	3.8	3.7 - 5.1 (1.4 yrs)
20	3.8	2.2	2.2	2.1	2.1 - 3.8 (1.7 yrs)
21	4.6	5.0	4.6	4.0	4.0 - 5.0 (1.0 yrs)
22	4.0	3.5	2.9	3.5	2.9 - 4.0 (1.1 yrs)
23	5.3	*	7.1	5.1	5.1 - 7.1 (2.0 yrs)
24	3.4	2.8	2.9	2.7	2.7 - 3.4 (.7 yrs)
N =	23	23	24	23	
Mean =	4.4	4.6	4.7	3.9	
Range =	3.4 - 5.8	2.2 - 6.6	2.2 - 7.1	2.1 - 5.1	

Grade Placement at time of Test Administration: 3.8

*Child absent

One quickly notes the significant discrepancies that exist when comparing the individual scores from one test to the other. Seventy percent of the children received grade scores ranging more than one year.

In the second instance, a comparison was made of the instructional reading levels as obtained from the Metro and an informal reading inventory. Prescott, et al., state that -- "The Metro Reading Test is essentially a group-administered silent reading inventory designed specifically to estimate a pupil's Instructional Reading Level. ... The difficulty of the reading passages has been controlled so that, in general, they match the difficulty of basal readers;..." (Prescott, Barlow, Hogan and Farr, 1978) The authors of the Metro state that the Metropolitan Reading Test is modeled after the informal reading inventory. Instructional reading levels were obtained from the administration of the Metro and an informal reading inventory to the seventy-nine second graders in a public elementary school.

The informal reading inventory has often been recommended as the most accurate assessment of a child's instructional reading level (Zintz, 1981, p. 99; Farr and Roser, 1979, p. 39; Hollander, 1974, pp. 905-907; Lamb and Arnold, 1976, p. 153; Pikulski and Shanahan, 1982, pp. 94-115). The informal reading inventory used in this study was developed for the Macmillan R Reading Series. Selections ranging from sixty words (pre-primers) to approximately one hundred and forty words (primer+), were extracted from the last story of each basal reader within the series. The passage selected from the last story of one reader was used to determine the suitability of the next book for instructional purposes. The Harris-Jacobson Readability Formula (Harris, 1975) was used to ensure that the selections gradually increased in difficulty and reflected the intended reading levels.

Five comprehension questions were written for each selection. The five questions consisted of the following:

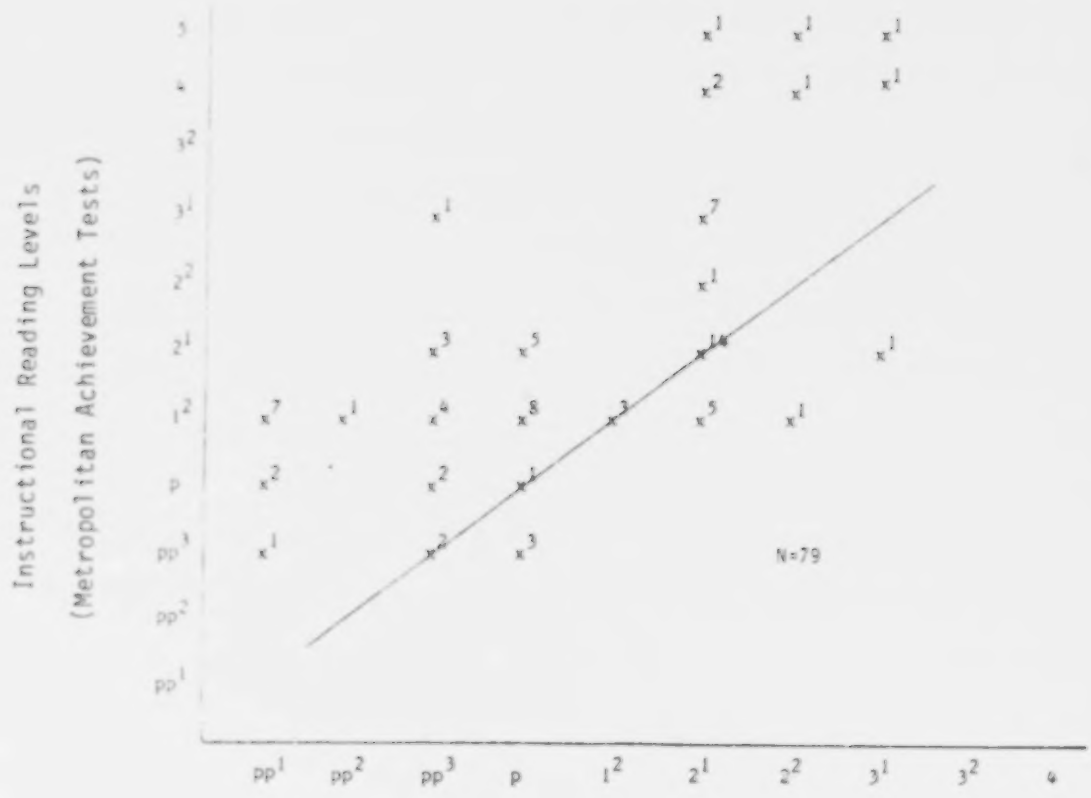
1. Two detail questions.
2. One vocabulary question.
3. Two interpretation questions: e.g., main idea, inference, drawing conclusion or sequence.

The informal reading inventories were administered and scored by each classroom teacher after having received approximately five hours of instruction and practice in the administration and scoring of informal reading inventories. It should be noted that the practice sessions continued until there was 100% uniformity in the scoring and evaluations of all teachers. This author has found, as did Lamberg (1975) and Roe and Aiken (1976), that teacher evaluations of informal reading inventories were highly consistent after sufficient training had occurred. The inventories were administered and scored in accordance with procedures outlined by Bond, Tinker and Wasson (1979). The Metro was also administered by the classroom teachers, but scored by the school system's testing office. The Coefficient of Correlation (r), computed for the sets of instructional reading levels, yielded an r of .04, indicating no relationship between the two sets of reading levels. Less that two percent of the variation in the IRI reading levels could be accounted for by the relationship with the Metro reading levels. A scatterplot of the paired data is contained in Table 2.

More than fifty percent of the instructional reading levels from the Metro varied as much as two to five reader levels from the instructional levels as determined by the informal reading inventories.

This author has not found a group administered standardized reading test suitable for grouping or determining instructional reading levels within the classroom. Accuracy should not be compromised for expediency. Standardized reading tests may be satisfactory, if one wishes to follow a general trend in the mean score for a particular group. Individual scores on a standardized test are significantly influenced by guessing. It is interesting to note that of the seventy-nine children tested in the second part of this study, only fifteen students failed to mark an answer for **every** question, even though many of the children were unable to read the paragraphs on the Metro that ranged above the second grade reading level.

TABLE 2



Scatterplot: Correlation of Instructional Reading Levels

Note: The number accompanying each plot relates to the number of children who received the particular set of instructional reading levels.

This study did not support the use of standardized test scores as adequate measures of reading achievement or as a substitute for individually administered informal reading inventories. Perhaps more time should be spent on becoming more knowledgeable in adapting the informal reading inventory for classroom purposes, rather than continually looking for quick and easy group-administered standardized tests to determine instructional reading levels for grouping or other diagnostic purposes. In a survey of over two hundred elementary schools, only six adapted the informal reading inventory for use within the classroom on a regular basis. Most reported using teacher judgment and standardized reading test scores.

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